

ABSTRACT

The magnetic circuit of synchronous compensator plant is included in an electric machine which is directly connected to a high supply voltage of 20 - 800 kV, preferably higher than 36 kV. The electric machine is provided with solid insulation and its winding(s) is/are built up of a cable (6) intended for high voltage comprising one or more current-carrying conductors (31) with a number of strands (36) surrounded by at least one outer and one inner semiconducting layer (34, 32) and intermediate insulating layers (33). The outer semiconducting layer (34) is at earth potential. The phases of the winding are Y-connected, and the Y-point may be insulated and protected from over-voltage by means of surge arresters, or else the Y-point is earthed via a suppression filter. A procedure is used in the manufacture of a synchronous compensator for such plant, in which the cable used is threaded into the openings in the core for the magnetic circuit of the synchronous compensator. (Figure 2.)